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Lehi City Resident

Lehi City Water Department 2010 Annual Water Quality Report



Protect Our Water!

We at Lehi City work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Lehi City Water Department
PWS ID #25015





Lehi City Water Quality Report 2010

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We would like you to understand the efforts we make to continually improve the supply, treatment and protection of our water resources. We are committed to ensuring a constant supply of high quality water. Our water sources are obtained from five wells and a spring. The spring is located in Alpine. These are considered groundwater sources and are treated by chlorination.

The Drinking Water Source Protection Plan for Lehi City is available for your review. It contains information about source protection zones, potential contamination sources and management strategies to protect our drinking water. Our water sources have been determined to have a low level of susceptibility from potential contamination such as agricultural operations, residential pesticides and herbicides, and residential wastewater disposal systems. We have also developed management strategies to further protect our sources from contamination. Please contact us if you have questions or concerns about our source protection plan.

We're happy to report that our drinking water meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact Lee Barnes at 801-768-7102 ext. 3. We want our valued customers to be informed about their water utility. If you would like to learn more, please attend any of our regularly scheduled city council meetings. They are held on the first and fourth Tuesday of each month at 153 North 100 East in the City Administration Building Council Room at 7 p.m. Mayor Bert Wilson and council members, Kaye Collins, Johnny Revill, Mark Johnson, Stephen Holbrook and James Dixon will be in attendance.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

ND/Low - High - For water systems that have multiple sources of water, the Utah Division of Drinking Water has given water systems the option of listing the test results of the constituents in one table, instead of multiple tables. To accomplish this, the lowest and highest values detected in the multiple sources are recorded in the same space in the report table.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (ug/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL) - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Date - Because of required sampling time frames i.e. yearly, 3 years, 4 years and 6 years, sampling dates may seem out-dated.

Lehi routinely monitors for constituents in our drinking water in accordance with the Federal and Utah State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2010.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some constituents. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Maximum Contaminant Levels (MCLs) are set at very stringent levels by the EPA and State Division of Drinking Water. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

In an effort to help maintain the quality of water that we have, the water department would like to make some recommendations to the residents on things they can do to ensure a good supply of water. The proper use of fertilizers, pesticides, herbicides, and backflow procedures can ensure that the water we use does not become contaminated.

Fertilizers

The proper use of fertilizers can make a difference between a beautiful yard and an ordinary one. The main ingredient in fertilizer that promotes green, healthy growth is nitrogen. This element is essential to living systems and is used to build many essential components necessary to life. It can also cause problems when it is over used. The nitrogen becomes nitrate as it dissolves. It moves readily through the soil into the ground water strata unless used by the plants. The nitrate can cause health problems if it exceeds a certain level. It is necessary to apply only the amount the plant will use as it is growing.

Recommendations for applying fertilizers are:

- Calibrate your spreader or sprayer to keep from applying too much.
- Avoid spilling to keep fertilizer from entering the storm drain system.
- Do not spray or apply near wells to avoid contamination of the water.



TEST RESULTS

Contaminant	Violation Y/N	Level Detected ND/Low- High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
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Microbiological Contaminants

Total Coliform Bacteria	N	2	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2010	Naturally present in the environment
Turbidity for Ground Water	N	0-3	NTU	N/A	5	2010	Soil runoff

Radioactive Contaminants

Alpha emitters	N	5-13	pCi/l	0	15	2010	Erosion of natural deposits
Radium 228	N	0-1	pCi/l	0	5	2010	Erosion of natural deposits

Inorganic Contaminants

Arsenic	N	2300	Ppt	0	10000	2010	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	17-231	ppb	2000	2000	2010	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper a. 90% results b. # of sites that exceed the AL	N	a.ND b.0	ppb	1300	AL=1300	2009	Corrosion of household plumbing systems; erosion of natural deposits
Lead a. 90% results b. # of sites that exceed the AL	N	a. ND b.	ppb	0	AL=15	2009	Corrosion of household plumbing systems, erosion of natural deposits
Fluoride	N	200-500	ppb	4000	4000	2010	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Chromium	N	2-3	ppb	100	100	2010	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate (as Nitrogen)	N	200-1600	ppb	10000	10000	2010	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	2-5	ppb	50	50	2010	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	5-38	ppm	None set by EPA	None set by EPA	2010	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills.
Sulfate	N	5-85	ppm	1000*	1000*	2010	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland
TDS (Total Dissolved solids)	N	84-421	ppm	2000**	2000**	2010	Erosion of natural deposits

Disinfection By-products

TTHM [Total trihalomethanes]	N	1-11	ppb	0	80	2010	By-product of drinking water disinfection
Haloacetic Acids	N	5	ppb	0	60	2010	By-product of drinking water disinfection
Chlorine	N	200	ppb	4000	4000	2009	Water additive used to control microbes

Pesticides

One of the big problems encountered by gardeners, home owners, and farmers are pests or insects. To control these bugs and other pests we often use pesticides and/or other chemicals to get rid of them. A pesticide is used to kill insects and other pests and is therefore a poison. The Lehi City Water Department is concerned that these chemicals be used properly and wisely. Pesticides applied during crop, lawn, or garden maintenance may leach into the ground water and cause contamination. The proper storage, mixing application, spill cleanup, watering and disposal procedure should be included in your best management practices. It is suggested that you use only the chemicals that are needed. A few things to remember when using pesticides are:

- Be willing to accept a low level of insect or plant disease infestation.
- Use pesticides only when necessary.
- Identify pests correctly and then use the proper pesticides.
- Calibrate your spreader or sprayer to keep from applying too much.
- Don't over water after application.



Herbicides

Unwanted plants, weeds, or other noxious plants are often controlled by the use of herbicides. They help control weeds in our lawns and gardens by selectively killing the undesirable plants. These chemicals can also be poisonous to humans and must be handled carefully. The Lehi City Water Department is concerned that these chemicals, if not used properly, can leach into the ground water and cause contamination. A few reminders when using herbicides:

- Store in a safe place that children or others can't get to.
- Mix only on an impermeable surface so spills can be cleaned up.
- Read the label and follow instructions for mixing the proper amount and strength.
- Measure the total square feet to be treated and use only the amount needed.
- Treat only the area that is needed, there is no need to over use the chemical.
- Clean up spills and dispose of any extra chemical by following the manufactures' instructions.



The use of all chemicals around our homes and gardens can be a big help in controlling weeds, pests, disease, or other problems that we may have. However, we all have the responsibility to keep the environment safe for us and others to live in. By using chemicals wisely and responsibly we will keep them from polluting our water and other resources that are needed to sustain the life style we enjoy.

Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Lehi is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.



Backflow

There are many connections to our water distribution system. When connections are properly installed and maintained, the concerns are very minimal. However, unapproved and improper piping changes or connections can adversely affect not only the availability, but also the quality of the water. Lehi has two water systems, a culinary system and a pressurized irrigation system. The pressurized irrigation should be used for watering lawns and gardens. It should never be connected to the culinary system. Swing pipes or a combination of valves are not allowed according to Lehi City ordinance. A cross connection may let polluted water or even chemicals mingle into the water supply system when not properly protected. This not only compromises the water quality but can also affect your health. So, what can you do? Do not make or allow improper connections at your homes. Even that unprotected garden hose lying in the puddle next to the driveway is a cross connection. When the cross connection is allowed to exist at your home, it will affect you and your family first. If you'd like to learn more about helping to protect the quality of our water, call us for further information about ways you can help.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Water Conservation in the Home

- Only run the dish washer when you have a full load.
- Adjust your washing machine water level to match your load size.
- Check your appliances, faucets, hose connections, pipes and toilets for leaks and fix them. A faucet that drips can waste up to 3,280 gallons of water per year.
- You can save a surprising amount of water by avoiding any unnecessary flushing. A water-saving displacement device in the tank will reduce the amount of water needed to flush. Or choose an ultra-low flush toilet and save up to 3 gallons of water.
- A full bath uses almost 70 gallons of water, so opt for a five minute shower under a low-flow showerhead. You'll save 45 to 60 gallons! 1 person taking shorter showers can result in a savings of more than 10,000 gallons of water a year!
- Avoid the temptation to leave the water running while you brush your teeth. Also turn the water flow down when you do use your sink.
- There are many water-saving devices available for purchase. To make your home more conservation-friendly look for aerators, displacement devices and flow regulators.
- Look for creative ways to reuse water. A bucket in the shower can catch water for plants or clean up jobs.

